



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

April 25, 2003

OFFICE OF  
WATER

Dear Colleague:

In the September, 2001 Mercury Maps report, nearly all watersheds with pulp or paper mills were eliminated from the analysis because, based on a limited data set, estimated mill mercury loads were generally found to be significant relative to air deposition loads. Since release of the report, additional data on mill effluent mercury concentrations has become available. The data indicate that the original analysis over estimates mill mercury contributions to their receiving waters. Because insufficient data exists to revise the original analysis it is more appropriate to gather local data, including effluent monitoring data, in watersheds with pulp or paper mills. Additional details on applying the Mercury Maps approach on local and regional scales will be made available in summer, 2003.

Pulp and paper mill effluent mercury loads, in the September, 2001 Mercury Maps report, were applied at a single annual rate of 3.1 lbs/year, based on actual effluent monitoring data from 10 mills in Maine. The State of Maine developed *Average Limit* values, i.e., 95<sup>th</sup> percentile of the mean effluent concentrations using clean techniques, for about 150 industrial and municipal wastewater treatment facilities statewide. The average effluent concentration for the 10 mills in the study was 13 ppt. Of these 10 mills, just three had annual design flow rate values in the Permit Compliance System data, as delivered in BASINS. The average flow rate from these three mills was 79 MGD. This average flow rate times the average effluent concentration gives an average load of 3.1 lbs/yr. This loading rate tended to exceed the 5% of air deposition load threshold in most cataloging unit watersheds that contained mills. Thus, nearly all watersheds containing mills were excluded from the analysis.

Since the release of the September 2001 report, the American Forest and Paper Association (AF&PA) and the National Council on Air and Stream Improvements (NCASI) have provided additional data on mercury in mill effluent to EPA. This data indicates that both the average concentration and average flow rate used in the original Mercury Maps report are high with respect to most mercury monitored pulp and paper mills. In addition, due to variability in effluent quality with mill type, pollution prevention efforts, source of fiber and other mill-specific characteristics, the data indicate that individual mills need to be considered separately. The necessary information, however, is not readily available at the required level of detail (e.g., mills are characterized in PCS only by SIC code: pulp mills, SIC 2611; and paper mills, SIC 2621). Furthermore, design flow rate data are not widely available for these facilities. For these reasons, revising the national level analysis is presently infeasible. Instead, EPA recommends that for watersheds with mills, a more localized approach be used. That is, actual monitoring data for the mill(s) of interest, combined with custom watershed

boundaries, delineated specifically for the waterbodies of interest, should be used to assess the relative impact of mill effluent and air deposition. This approach is illustrated in *Mercury Maps: Application at Local and Regional Scales*, currently in peer review. It is anticipated that this document will be released in summer, 2003.